

General Information

- ◆ Approved in FY 2018
- ◆ Established in April 2020
- ◆ Established by the Graduate School of Medicine
- ◆ Partner institution: The AIRC Institute of Molecular Oncology (IFOM ETS), Italy
- ◆ Location: Kyoto University, Kyoto, Japan (inbound)
- ◆ Purposes: Promotion of international research collaboration through the establishment of an international joint laboratory on the campus of the KU Graduate School of Medicine, co-funded by IFOM ETS and Kyoto University.
- ◆ Functions: Advanced cancer biology research and training of graduate students and early-career researchers.

Positive ripple effects to the university's activities

- Boost research activity by bringing together the knowledge and expertise of both institutions.
 - Foster global human resources by internationalizing the research environment
 - Create innovation through interdisciplinary academic collaboration
- [FY 2024]
- Promotion of research collaboration in Japan and overseas [(Dr. Anthony Cesare) co-authored a paper in 2019], and publication of internationally co-authored academic papers.
 - Hosting short-term students through the AMGEN Scholar Program and the JSPS summer program to contribute to the university's internationalization efforts.
 - Short-term stay in IFOM ETS in May and October to foster our international relationship.

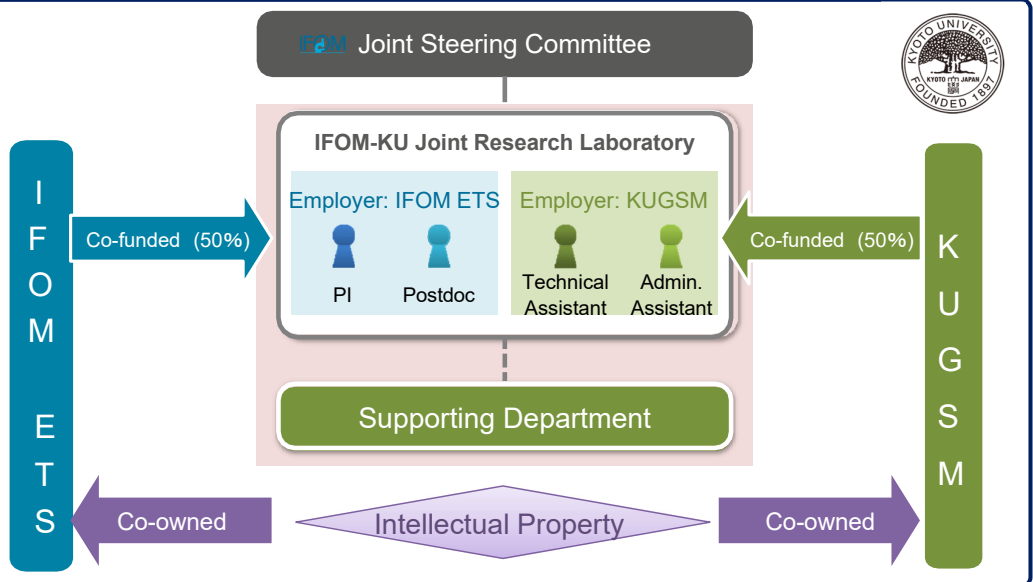
Activity Overview

About IFOM



IFOM ETS is an institution dedicated to the study of the molecular processes of cancer. It was established by the Italian Foundation for Cancer Research (FIRC) and boasts the largest-scale and best facilities in Europe. Numerous high-quality research projects are being conducted there.

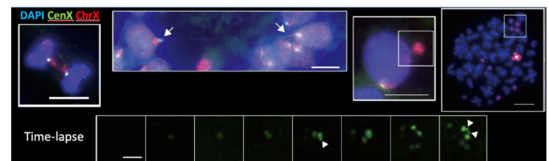
KU's Graduate School of Medicine has an ongoing relationship with IFOM ETS. Since the conclusion of departmental academic and student exchange agreements in 2010, the two institutions have been implementing research and student exchange actively through holding joint symposiums, etc.



Main Activities in FY 2023

1 Research outcomes

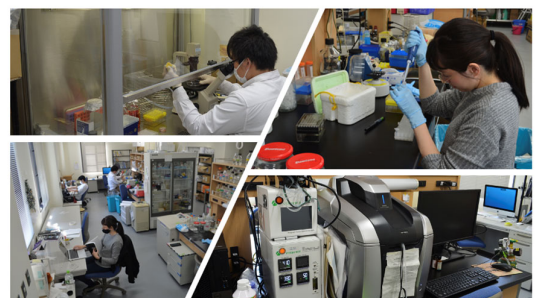
- Articles
 - Yuki Sato and **Makoto T. Hayashi**,* Micronucleus is not a potent inducer of cGAS-STING pathway, Life Science Alliance, Feb 2, 2024; 7(4), DOI: 10.26508/lsa.202302424;
 - Diana Romero-Zamora,* Samuel Rogers,* Ronnie Ren Jie Low, Andrew B. Robinson, Scott G. Page, Blake JE Lane, Noa Lamm, Fuyuki Ishikawa, **Makoto T. Hayashi**™ and Anthony J. Cesare,™ A CPC-shelterin-BTR axis regulates mitotic telomere deprotection, bioRxiv, Jan 10, 2024 doi.org/10.1101/2024.01.09.574754
- Conference presentations
 - Diana Romero-Zamora,* Samuel Rogers,* Ronnie Ren Jie Low, Alexander Sobinoff, Scott G. Page, Fuyuki Ishikawa, Hilda Pickett, Anthony J. Cesare,™ and **Makoto T. Hayashi**,™ AURKB-TRF1-BTR Axis Promotes Mitotic Telomere Deprotection by Counteracting the TRF2 Basic Domain (Invited), CSHL Meeting Telomere & Telomerase 2023, NY, USA, May 2–6, 2023
 - Diana Romero-Zamora,* Samuel Rogers,* Ronnie Ren Jie Low, Alexander Sobinoff, Scott G. Page, Fuyuki Ishikawa, Hilda Pickett, Anthony J. Cesare,™ and **Makoto T. Hayashi**,™ Elucidation of the molecular mechanism of M-phase telomere deprotection, the 46th Annual Meeting of the Molecular Biology Society of Japan, Kobe, December 6–8, 2023
- Acquisition of external funding
 - Grant-in-Aid for Scientific Research-Basic Research (B), Challenging research (beginnings), SGH Cancer Research Grant, MSD Research Grant (Cancer Category), Enzyme Research Grant



Analysis of the fate of X chromosome fusion by the chromatid fusion visualization system (FuVis)

2 Education, internationalization, and outreach

- The laboratory hosted:
 - IFOM ETS post-docs: 1 (Nigerian)
 - Research assistants: 3 (1 Mexican, 2 Japanese)
 - Researchers/master's/doctoral students: 4 (1 Mexican, 1 Chilean, 2 Japanese)
 - Short-term international students (AMGEN Scholars Program): 1 (Indonesian)
- Meetings with IFOM ETS
 - PI chalk-talk meetings (online, once per month), PI meetings (online, once per month), PI retreat (Italy, October 10–12, 2023), SAB meeting (Italy, September 7, 2023)
- Education and outreach
 - 3rd IFOM-KU Joint Mini-Symposium (Milan, Italy, October 5, 2023)
 - Special intensive lecture on genetics and biochemistry by PI Dr. Makoto Hayashi for the postgraduate intensive course of the Graduate School of Science, Nagoya University (November 1–2, 2023)



The IFOM-KU Joint Research Laboratory